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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,569	04/15/2004	Cor F. van Egmond	2004B025	9135

23455 7590 09/20/2006

EXXONMOBIL CHEMICAL COMPANY  
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EXAMINER
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JOHNSON, EDWARD M

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/825,569

Applicant(s)

VAN EGMOND ET AL.

Examiner

Edward M. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughn et al. US 6,403,855.

Regarding claim 1, Vaughn '415 discloses a process for regenerating a catalyst comprising contacting the catalyst with an oxygenate to form an olefin comprising ethylene and/or propylene (see column 2, lines 39-44 and column 3, lines 22-24), sending the coked catalyst to a regenerator (see column 17, lines 7-10), for oxidation in an oxygen atmosphere (see column 14, lines 1-6), and re-circulation (see column 17, lines 7-10).

Vaughn fails to disclose separating air into an oxygen-containing stream and a nitrogen-containing stream.

Williamson '077 discloses separating air into an oxygen-containing stream and a nitrogen-containing stream (see column 12, lines 26-30).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Williamson's air separation unit to separate air into oxygen-containing and nitrogen-containing streams in the catalyst regenerating process of Vaughn because Williamson discloses the air separation step in a process for regenerating catalyst (title, abstract), wherein to produce oxygen-enriched and nitrogen-enriched streams that can be used in different treatment steps of the regeneration zone (column 12, lines 30-33), and Vaughn discloses contacting with air to add strength to the catalyst (see column 10, lines 49-60).

Regarding claims 2-3, it would have been obvious to one of ordinary skill in the art to use air from the atmosphere, which would be at room temperature or about 27 degrees C because Vaughn discloses contacting with air to add strength to the catalyst (see column 10, lines 49-60).

Regarding claims 4-8 and 30-31, it would have been obvious to an ordinary artisan to use streams comprising compressed oxygen and nitrogen because an ordinary artisan would use pressure to move the air into the disclosed regeneration unit and air comprises both oxygen and nitrogen in a ratio of about 0.27 oxygen:nitrogen.

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Regarding claims 9-10 and 29, Vaughn '415 discloses a fluidized catalyst bed (see column 11, lines 30-35).

Regarding claims 11 and 24-26, Vaughn '415 discloses polymerization to polyolefins (see column 14, lines 31-67).

Regarding claim 12, Vaughn '415 discloses hydrogen as a structure directing or affecting agent, which would motivate an ordinary artisan to hydrogenate with the disclosed hydrogen to affect the product structure, as disclosed.

Regarding claims 13-20, Vaughn '415 discloses sending the coked catalyst to a regenerator (see column 17, lines 7-10), for oxidation in an oxygen atmosphere (see column 14, lines 1-6), re-circulation (see column 17, lines 7-10), heating (see column 8, lines 19-21), and it would have been within the purview of an ordinary artisan to use an apparatus comprising a valve with which to control the disclosed oxygen atmosphere for regeneration.

Regarding claims 21-23, Vaughn '415 discloses conversion of methanol (see column 14, lines 7-21), which would motivate an ordinary artisan to obtain methanol through any means, including syngas and natural gas, which contains hydrogen sulfide and water.

Regarding claims 27-28, apparatus limitations are not given undue weight in process claims. And, in any case, Vaughn '415

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discloses heating (see column 8, lines 19-21), which would motivate an ordinary artisan to use a heat exchanger apparatus including a turboexpander and/or a cold box.

***Response to Arguments***

3. Applicant's arguments filed 8/3/06 have been fully considered but they are not persuasive.

It is argued that the Office Action states that Vaughn... and re-circulation. This is not persuasive because Williamson '077 discloses separating air into an oxygen-containing stream and a nitrogen-containing stream (see column 12, lines 26-30).

It is argued that further, one of ordinary skill in the art... achieving Applicants' invention. This is not persuasive because the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Williamson's air separation unit to separate air into oxygen-containing and nitrogen-containing

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streams in the catalyst regenerating process of Vaughn because Williamson discloses the air separation step in a process for regenerating catalyst (title, abstract), wherein to produce oxygen-enriched and nitrogen-enriched streams that can be used in different treatment steps of the regeneration zone (column 12, lines 30-33), and Vaughn discloses contacting with air to add strength to the catalyst (see column 10, lines 49-60).

#### **Conclusion**

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

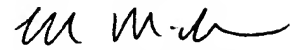


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Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "M M Johnson", written in a cursive style.

Edward M. Johnson  
Primary Examiner  
Art Unit 1754

EMJ